

Amendments to the Specification

Please amend the specification, without prejudice, as follows:

At Page 3, line 14, replace the paragraph beginning with "There are two main objectives..." with the following replacement paragraph, in which underlining and strikeouts show changes over the replaced paragraph:

There are two main objectives of this invention. The first is to provide a system and method that can automatically determine the spatial orientation of a spherical object, such as a game ball, by locating and identifying the position and two-dimensional orientation of an existing reference indicium such as a trade name, e.g., Top-Flite, ~~Titleist~~, TOP-FLITE or TITLEIST brands for golf balls, or a graphical image or a pattern, such as a dimple pattern on a golf ball, etc., on the spherical object. The second objective of the system and method of the present invention is to manipulate the spatial orientation of the spherical object in the context of the defined position and two-dimensional orientation of the reference indicium so that an additional processing operation, e.g., printing, inspecting, etc., can take place at a predetermined location, i.e., the "target point", on the spherical object, i.e., the target point has a predetermined positional relationship with respect to the predetermined final position and two-dimensional orientation of the reference indicium.

At Page 9, line 27, replace the paragraph beginning with "The Euler angles required ..." with the following replacement paragraph, in which underlining and strikeouts show changes over the replaced paragraph:

The Euler angles required to orient the spherical object O, in the context of the predetermined final position and two-dimensional orientation of the existing reference indicium I, are calculated by accurately measuring the position and two-dimensional orientation of the existing reference indicium I on the spherical object O to define or determine the actual position and two-dimensional orientation of the spherical object O at the first orienting work station ST2 ~~TS2~~ prior to implementing any of the orienting steps described above. This is accomplished by taking images, e.g., two photographs, which together encompass the entire surface area of the spherical object O and using conventional image processing techniques to accurately determine or define the position and two-dimensional orientation of the existing reference indicium I on the spherical object O. The term "image" as used herein refers to using an imaging system such as a

line sensor camera and image acquisition device to gather a plurality of line data from the line sensor camera while the spherical object O is rotated at least one revolution about an axis that passes through the center of the spherical object O and is perpendicular to the image axis of the line sensor camera (see, e.g., reference numeral 28 in FIG. 2 which identifies a line sensor camera and reference character 28_{IA} which identifies the image axis of the line sensor camera 28 in FIG. 2). It will be understood by those skilled in the art that other types of imaging systems can be used in the practice of the present invention such as area scan cameras, and other imaging systems of like capability.